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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/676,200

10/01/2003

Cyril Allouche

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7095

7590

11/02/2006

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EXAMINER

SMITH, JEFFREY S

ART UNIT

PAPER NUMBER

2635

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/676,200

Applicant(s)

ALLOUCHE, CYRIL

Examiner

Jeffrey S. Smith

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/01/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 1, the following elements lack antecedent basis:

Line 7, "the result"

Line 10, "the joining"

Line 14, "the mean standard deviation"

Line 26, "the noise function."

For claims 1-2, 17-22, and 51-54, "the mean standard deviation" is a term that is unknown to those of ordinary skill in this art. The "mean" is a well known term, and the "standard deviation" is a well known term. However, the "mean standard deviation" is unknown. If applicant intends this phrase to be the standard deviation, then the claim must be amended accordingly. If the "mean standard deviation" is a new function created by the applicant, then additional clarity is required.

For claims 1, 17-22, and 51-54, the phrase "the same processing operations" lacks antecedent basis and is vague and indefinite. The claim must identify what the same processing operations are.

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For claim 2, "the non-centered sub-groups" lacks antecedent basis. Also, the term "1 being preferably equal to 1.5" is unclear, because 1 is not equal to 1.5.

For claims 3 and 4, "images i" lacks antecedent basis. Claim 1 provides antecedent basis for "two images, i-1 and i."

For claims 17-22, "the first curve" lacks antecedent basis.

For claims 17-22, the phrase "and so on and so forth" is vague and indefinite.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 51 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 51 recites a computer program per se, which is not embodied on a computer readable storage medium.

### ***Allowable Subject Matter***

Claims 1-50 and 52-54 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Each independent claim iteratively determines a standard deviation for a sub-group, keeps values in the sub-group that meet a criterion, then performs an operation of regression to determine coefficients for a noise function that defines noise. Applying

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this combination of functions in this way to determine noise in radiography is not disclosed nor suggested by the art of record.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 7,054,474 issued to Krieger discloses using regression in x-ray image analysis (column 12 lines 40-42).

U.S. Patent No. 6,498,831 issued to Granfors et al. discloses mean values and a standard deviation that are used to reduce noise in an x-ray image.

U.S. Patent No. 6,256,403 issued to Florent et al. discloses a method of reducing noise in an x-ray image by using a standard noise deviation.

U.S. Patent No. 6,204,891 issued to Florent discloses a method for temporal filtering of noise in an image.

U.S. Patent No. 5,818,896 issued to Hsieh discloses a method for using standard deviation to reduce noise in tomography.

U.S. Patent No. 6,314,160 issued to Dhawale et al. discloses an adaptive fluoroscopic noise reduction method.

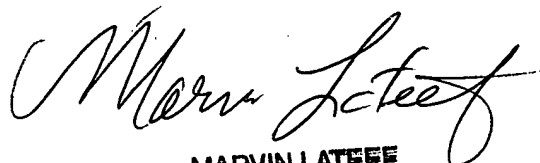
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey S. Smith whose telephone number is 571 270-1235. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin Lateef can be reached on 571 270-1245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSS October 27, 2006  
JSS

  
MARVIN LATEEF  
SUPERVISORY PATENT EXAMINER